NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES
GUIDE TO PROPER HANDLING OF BAT EXPOSURES
May 2013

Introduction

Rabies in humans is rare in the USA, with usually only 1 - 4 human cases diagnosed per year. The most common source of human rabies in the USA since the 1990s is bats. Between 2001 and 2012 there have been 20 naturally occurring cases of rabies in humans. All but one of these cases were associated with bats. In a few cases there was history of a bat bite, but the majority of cases handled or had direct contact with a bat but did not report being bitten. These findings suggest that limited or seemingly insignificant physical contact with rabid bats may result in transmission of rabies virus to humans, even without a definite history of a bite. The most likely scenario is that a bite was ignored or went unnoticed during an interaction with a bat.

New Jersey History

The 5 year average of bat rabies cases from 2007 - 2011 was 44 per year. In 2012, 68 bats (out of 1,082 submitted for testing) were diagnosed with rabies, representing the highest number of rabid bats documented in a calendar year. However, the percentage of confirmed rabid bats has stayed relatively constant at about 4 -6% of the bats submitted for testing.

There have been 2 cases of human rabies in New Jersey from bat exposures. A Warren County man died of rabies in the fall of 1997 with a history of bats in his home several months before. There was no report of the patient being bitten or scratched, but his wife later reported that he had removed several bats from the residence using "rags" over his bare hands to catch them. This was the first human case of rabies in New Jersey since 1971, when a person who was bitten by a rabid bat refused to complete rabies treatment post-exposure prophylaxis (PEP) and eventually developed the disease and died.

Management of Known or Possible Rabies Exposures from Bats

Because bat bites may be less severe, heal rapidly, and be more difficult to recognize than bites inflicted by larger mammals, any potential exposure to a bat requires a thorough evaluation. If possible, bats involved in potential human exposures should be safely collected and submitted for rabies testing. The risk for rabies resulting from an incident with a bat may be difficult to determine because of the limited injury inflicted by a bat bite and inaccurate recall of a bat encounter. For these reasons, any direct contact between a human and a bat should be carefully evaluated for an exposure.

Rabies PEP is recommended for all persons with a known or suspect bite, scratch, or mucus membrane exposure to a bat, unless prompt laboratory testing of the bat has ruled out rabies infection (see page 2 for guidance regarding laboratory testing of bats). **PEP should also be considered when there is direct contact with the bat and a bite cannot be excluded.**

PEP may be appropriate even in the absence of a demonstrable bite, scratch or mucus membrane exposure in situations where there is a reasonable probability that such an exposure occurred. Situations that might qualify as exposures include finding a bat in the same room as a person who might be unaware that a bite or direct contact occurred, such as a deeply sleeping person who awakens to find a bat in the room, or an adult witnessing a bat in the room with a previously unattended small child, mentally disabled or intoxicated person. These situations should not be considered exposures if laboratory testing of the bat has ruled out rabies infection or circumstances suggest it is unlikely that an exposure took place.

The absence of an identifiable bite wound should not negate the decision to treat, as bat bite wounds are extremely small and may be virtually undetectable within hours. **An awake person merely being in close proximity to a rabid or suspect rabid bat does not constitute an exposure.** In general, PEP is not recommended for other household members who did not have direct contact with the bat, or were awake and aware when in the same room with a bat.

Physicians should consider initiating immediate rabies PEP for bat bites, prior to completion of rabies testing, in the following high-risk cases:

1. Bites to the face or neck,
2. A bite from an aggressive or ill bat, or
3. If testing will be delayed in a bat bite situation.

Specimen Collection and Submission for Laboratory Testing

In all instances of potential human exposure involving bats, the bat in question should be collected and submitted to the New Jersey Department of Health (NJDOH) Rabies Laboratory for testing, if possible. Residents reporting a bat in the home should be instructed to leave the bat alone until the ACO or other responder arrives on the scene to capture the bat. **Residents should not be told to open a window or otherwise release the bat from the home.** ACOs, police officers and other officials responding to "bat in the house" situations should safely capture the bat if possible when an exposure has occurred.

The head of the bat should not be crushed or destroyed during capture, as this may render the brain tissue unsatisfactory for rabies testing. Bats can be **safely captured** utilizing leather work gloves, a small box or coffee can, a piece of cardboard, and tape by following these steps:

1. Put on the leather work gloves,
2. Place the box or can over the bat,
3. Slide the cardboard under the box or can to trap the bat inside,
4. Tape the cardboard to the box or can securely, and
5. Punch small holes in the top.

The captured bat should be held until a determination is made by local health officials as to whether testing is necessary. If the bat is submitted for testing, a veterinarian or ACO can euthanize the bat, or alternatively, bats can be shipped to the Rabies Laboratory alive, with a clearly visible label on the container indicating that it contains a **"LIVE BAT"**. If the bat is dead, it should be kept at cool temperatures during storage and transportation to prevent decomposition, which will render the bat unsatisfactory for testing. **Bats that bite people should be delivered directly to the Rabies Laboratory and tested on a priority basis; the use of couriers and delivery services which delay specimen transport by more than 24 hours should not be used in this situation.** However, in situations where a bat is found in the house and there are no known bites or scratches, immediate human treatment or emergency (e.g., weekend) testing of bats is not indicated.

Public Education

Public education efforts should stress that **contact with downed bats and other ill-appearing wildlife should be avoided** and that all physical contact with bats should be carefully evaluated by a physician for possible rabies PEP. It should be emphasized that PEP may be indicated even in the absence of puncture wounds or specific a history of a bite.

Because reduction of bat populations is not a feasible or desirable strategy for rabies control in bats, **human and domestic animal contact with bats should be minimized by physical exclusion of bats from houses and surrounding structures by sealing entrances used by bats**. Bats should not be routinely handled and should never be kept as pets.

In addition, all dogs and cats should be currently vaccinated against rabies to provide a barrier to

human exposures to wildlife rabies through pets.

Additional information

For additional information on bats and rabies, contact the NJDOH, Infectious and Zoonotic Diseases Program, at 609-826-4872 or go to the NJDOH Website:
http://www.state.nj.us/health/cd/rabies/techinfo.shtml
http://nj.gov/health/cd/rabies/documents/shouldknow_bats.pdf

Centers for Disease Control and Prevention website:
http://www.cdc.gov/rabies/index.html
http://www.cdc.gov/rabies/bats/index.html